# Therapist Adherence in Cognitive Behavioural Therapy and Schema Therapy for Depression

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## ABSTRACT

Maintaining high levels of adherence to therapy modalities is essential to ensure that a therapy is being delivered as prescribed. The current study evaluated therapist adherence to cognitive behavioural therapy (CBT) and schema therapy modalities in the treatment of depression. Therapy sessions from 99 participants were rated using the Collaborative Study Psychotherapy Rating Scale for the Comparison of Cognitive Therapies (CSPRS-CCT). Three sessions were selected for each participant from early, middle and late phases of therapy. It was hypothesised that therapy sessions of participants randomised to CBT would have higher adherence scores on the *CBT* subscale than those randomised to schema therapy and therapy sessions of those randomised to schema therapy would have higher adherence scores on the *schema therapy* subscale than those randomised to CBT. Scores on the *facilitative conditions* and *explicit directiveness* subscales of the CSPRS-CCT were expected to be similar across therapy type. Adherence was expected to be rated higher in the early to middle phases of treatment and to stabilise or decrease in the later stage of therapy, for both therapy groups. The CBT group was found to score higher on the *CBT* subscale, while the schema therapy group scored higher on the *schema therapy* subscale. No difference was found between the two therapies on the *facilitative conditions* and *explicit directiveness* subscales. A therapy by phase interaction was found for the *CBT* subscale with the schema therapy group's scores increasing slightly over the three phases of therapy, while scores for the CBT group decreased over therapy. No therapy by phase interaction was found for the *schema therapy* subscale.. Understanding how therapies are delivered is an important step in determining what aspects play a role in effective therapy. Having reliable ways to assess delivery of these therapies allows us to determine if a psychotherapy is being delivered to a client as intended.

## Introduction

Depression affects over 300 million people worldwide (World Health Organization, 2017). In the American Psychiatric Association's DSM-5 (2013), depressive disorders are characterised by sadness, emptiness, or irritability and the individual's capacity to function is affected by somatic and/or cognitive changes. The *Annual Update of Key Results 2015/16: New Zealand Health Survey* (Ministry of Health, 2016) reported 6.8% of adults had experienced psychological distress within the past four weeks. This equates with around 256,000 New Zealand adults experiencing psychological distress, including depression, at any one time. Te Rau Hinengaro: The New Zealand Mental Health Survey reported the projected lifetime risk of major depressive disorder by age 75 to be 25.7%, indicating that around one quarter of New Zealanders will experience major depressive disorder at some point in their lives (Oakley-Browne et al., 2006).

Depression can have a profound impact on the physical, emotional and spiritual wellbeing of people experiencing it. The Royal Australian and New Zealand College of Psychiatrists (2016) estimated that the Disability-Adjusted Life Years (DALY) for severe depression in New Zealand is 20,414, based on Global Burden of Disease data from 2010. DALY is the sum of the years which have been lost due to premature mortality and disability caused by an illness. According to this same report, people who access the mental health system in NZ have more than twice the mortality rate of the general population.

### Treatment for depression

Due to the high prevalence and significant burden of depression, effective treatments are vital. Psychotherapies and medications are currently the main treatments for depression, with psychotherapies being the preferable treatment for mild to moderate

depression (Malhi et al., 2018). DeRubeis et al. (2005) found similar effectiveness of cognitive therapies and antidepressants for treating those with moderate to severe depression. Boschloo et al. (2019) compared treatment of depression with cognitive behavioural therapy (CBT) versus antidepressants. Overall they found a slightly larger improvement for those treated with antidepressants However when they examined the individual symptoms of depression using the Hamilton Depression Rating Scale they found that, while five depressive symptoms responded better to treatment with antidepressants than to treatment with CBT, no difference was found between antidepressants and CBT for the other 12 symptoms. While antidepressants are commonly prescribed as a treatment for depression, they come with a higher risk of relapse, particularly in those who have recovered and then discontinue antidepressant use (DeRubeis et al., 2008; Berwian et al., 2017). Antidepressants can also come with side-effects, and several may need to be tried before a suitable type is found (Berwian et al. 2017).

Because psychotherapies are a key treatment in depression, it is important to ensure therapists are using them correctly so they have the intended impact on clients. Cognitive behavioural therapies are a type of psychotherapy, defined as a time-limited structured approach to treating various psychiatric disorders (Beck et al., 1979). Cognitive behavioural therapy and schema therapy are two such cognitive psychotherapies used in the treatment of depression. Cognitive behavioural therapy focuses on assisting clients to change problematic patterns in thinking and behaviour, which are occurring in the present (Beck et al., 1979; Beck, 1995). Schema therapy was originally developed to treat personality disorders targeting maladaptive schemas, and unmet emotional needs, which have developed early in the individual's life (Young, 1990), and is now also used in the treatment of Axis I disorders (DSM-IV; American Psychiatric Association, 2000) such as depression.

CBT and schema therapy have therapy-specific and overlapping components. CBT specific components include recording and monitoring thoughts, recognising cognitive

errors and understanding the relationship between thoughts and feelings. Schema therapy includes components such as understanding the activation of schemas and modes, linking development of these schemas and modes to early life and to depressive symptoms using experiential strategies to heal schemas and strengthening healthy schemas and modes. Both CBT and schema therapy have overlapping components such as education about depression, addressing the need for change, and collaborative aspects such as reviewing progress and negotiation of therapy content, while encouraging the client's independence.

**Therapist adherence and outcome**

Research about treatment adherence aims to determine that a therapy is being delivered as it was intended, according to established treatment guidelines and protocols (Hogue et al., 1996). If treatment adherence is high, it can be concluded that the particular treatment modality is being delivered as intended. Adherence research is important in psychotherapy research. It is essential to understand the mechanisms of change in psychotherapies such as cognitive behavioural therapy and schema therapy and to understand how the benefits of therapies can be maximised.

Substance abuse was the focus for Martino et al. (2008), who used the Independent Tape Rater Scale to rate therapist adherence to motivational enhancement therapy, a variant of motivational interviewing, for the outpatient treatment of substance use problems. Higher levels of therapist competence (how skilfully the therapist delivers therapeutic techniques) and adherence to motivational enhancement therapy for drug abuse were found to be associated with increased client motivation and some positive treatment outcomes such as increased negative drug screens.

Greater adherence at early and middle stages of enhanced CBT (CBT-E) has been found to be associated with better outcome for bulimia nervosa, in a study involving 36 adult participants (Folke et al., 2017). Adherence to cognitive therapy techniques has been

found to be associated with greater symptom improvement for those with more severe symptoms of depression by Webb et al. (2012) involving 105 adult participants with major depression.

Hogue et al. (2008) conducted a study involving 136 adolescents with substance abuse and related behaviour problems (internalising and externalising behaviours). Stronger adherence to CBT, but not to multidimensional family therapy predicted a greater reduction in cannabis use. Stronger adherence to both therapies predicted a greater reduction in externalising symptoms, and intermediate adherence to both therapies predicted a greater reduction in internalising problems.

Goldman and Gregory (2009) examined adherence as a predictor of outcome in dynamic deconstructive therapy (DDP) for ten people with borderline personality disorder and alcohol problems. Adherence was assessed using a 25 item scale, 16 items of which assessed adherence to the DDP model, while the other nine items assessed interventions which were contraindicated in the DDP model. Adherence was positively associated with improvement in primary symptom severity, and in all secondary symptom measures (parasuicidal behaviour, heavy drinking, institutional care, depression and dissociation) with the exception of perceived social support.

Multisystemic therapy was used to treat 1979 youths with antisocial behavioural problems in a study by Chapman and Schoenwald (2011). Adherence predicted greater reductions in both internalising and externalising problems, and was associated with lower post-treatment criminal activity. Lange et al. (2017) studied therapist adherence to MST for externalising behaviour problems in 4290 Dutch adolescents. Therapist adherence was found to predict all three post-treatment outcome measures – living at home, engagement in school or work, and no new arrests. Therapist experience and language but not client gender were found to be predictors of therapist adherence.

Lange et al. (2019) investigated parental perceptions of therapist adherence in 848 families receiving multisystemic therapy (MST) for antisocial adolescent behaviour and found that adherence did not predict outcome after controlling for therapist/client alliance.

Therapist adherence to CBT for people with panic disorder was studied by Huppert et al. (2006), who found that higher pre-treatment Anxiety Sensitivity Index (ASI; Peterson & Reiss, 1992) scores were related to greater adherence, particularly in earlier therapy sessions. Adherence alone was not significantly related to change on the ASI or Panic Disorder Severity Scale (PDSS; Shear et al., 1997), but was found to interact with motivation to predict outcome on the PDSS, but not on the ASI.

Barber et al. (1996) found that adherence to techniques in supportive expressive psychodynamic therapy did not predict change in depression. Barber et al.'s study involved the rating of audiotapes of session three for 29 clients with major depression using the Penn Adherence-Competence Scale for Supportive-Expressive therapy (Barber & Crits-Christoph, 1996). Webb et al. (2010) conducted a meta-analysis of 36 studies examining the relationship between adherence or competence and outcome. Therapies examined in the 36 studies were interpersonal psychotherapy (IPT), CBT, dynamic therapy and emotion focused trauma therapy for depression, drug use, mixed diagnoses, bulimia and child abuse trauma. No association was found between therapist adherence and outcome. Weck et al. (2013) found that adherence was not associated with decreased relapse one year after treatment with maintenance CBT for recurrent major depression. Campos-Malady et al. (2017) found that while adherence to the adolescent community reinforcement approach, a behavioural intervention for youth substance use, that includes the wider family and other social and environmental reinforcers, was not predictive of substance use outcome for the entire sample of adolescent participants, adherence did predict decreased substance use in those who completed the 12 month follow-up. A 2018 study by Snippe et al. measured therapist adherence by rating the occurrence or non-occurrence of techniques from the CBT and mindfulness-based cognitive therapy manuals, and found that therapist adherence

to CBT and mindfulness-based cognitive therapy was not predictive of post-treatment depressive symptoms in people with diabetes.

**Measurement of adherence**

The Collaborative Study Psychotherapy Rating Scale (CSPRS) was developed to rate therapist adherence to CBT, IPT and clinical management in the treatment of depression in the National Institute of Mental Health Treatment of Depression Collaboration Research Program (Elkin et al., 1985; Elkin et al., 1989).

The CSPRS has three subscales measuring adherence to *CBT, IPT* and *clinical management* and two therapy non-specific subscales for *facilitative conditions* and *explicit directiveness.* Interrater reliabilities were low but acceptable for the *facilitative conditions* subscale (random effects ICC .47, fixed effects ICC .58) and acceptable to excellent for all other subscales, ranging from .58 (random effects) and .73 (fixed effects) on the *explicit directiveness* subscale to .88 (random effects) and .92 (fixed effects) on the *CBT* subscale (Hill et al., 1992). Internal consistency was acceptable for all but the *explicit directiveness* subscale, which had a low Cronbach's alpha of .50. Greater therapy specific behaviours were exhibited by therapists in their respective modalities, than in the other modalities. Clinical management therapists mostly used techniques from their own modality, while CBT and IPT therapists shared some from each other's approach, but few from clinical management.

A modified form of the CSPRS was used by McIntosh et al. (2005) to investigate adherence to IPT, CBT and specialist supportive clinical management (SSCM) in the treatment of anorexia nervosa. This modified form of the CSPRS by McIntosh et al. was used to rate audio recordings of psychotherapy sessions for anorexia nervosa, and included subscales for IPT, CBT, specialist supportive clinical management (SSCM) and a therapy non-specific subscale comprising 18 generic items. Those randomised to IPT had higher

adherence scores on the IPT subscale than those randomised to CBT or SSCM, those randomised to CBT had higher adherence scores on the CBT subscale than those randomised to IPT or SSCM, and those randomised to SSCM had higher adherence scores on the SSCM subscale than those randomised to CBT and IPT. No difference was found among the three therapies on the non-specific subscale.

Another modified form of the CSPRS – the Strong Without Anorexia Nervosa - Psychotherapy Rating Scale (SWAN-PRS) was used by Andony et al. (2015) to rate therapist adherence to CBT-E, Maudsley Anorexia Nervosa Treatment for Adults (MANTRA) and SSCM. Mean subscale scores were calculated for each session, the highest score for each session rated was used to determine treatment classification. For example if a therapy session received the highest score on the CBT-E subscale, then that session would be classified as a CBT-E session. Eighty-six percent of the total pool of rated sessions were classified correctly, ninety percent of CBT-E sessions, 81.2% of MANTRA sessions and 85.7% of SSCM sessions.

**Methodology and results in other adherence studies**

Scores on scales reflecting non-specific elements of therapy such as therapeutic alliance and aspects of the therapeutic relationship have been found to be comparable for specialist psychotherapies including CBT, IPT, SSCM and MANTRA (Hill et al., 1992; McIntosh et al., 2005; Andony et al., 2015) with the exception of a higher non-specific score for clients randomised to CBT-E than for those randomised to SSCM or MANTRA in Andony et al.'s study.

In a 2006 study by Huppert et al., 205 participants were randomised to receive CBT alone, CBT and placebo, CBT and Imipramine, Imipramine alone, or placebo alone. Anxiety levels were rated using the PDSS and ASI. Adherence was rated using an instrument developed for the study, in which 7-15 items were rated on a 1-7 Likert type

scale for each therapy session. These ratings were then summed to derive an average score for each session. Therapists also rated participant motivation as part of a questionnaire at the end of the second therapy session. Adherence was found to be high, with little variation.

Panic disorder and therapist adherence were studied by Zickgraf et al. (2016). Thirty-eight participants received panic control therapy, a type of CBT. Adherence in the sixth session was rated using a scale developed specifically for the study. This was a Likert type scale from 1-7, used to rate adherence to five specific interventions and homework. Adherence was found to be generally high, but was influenced by interpersonal variables. Early alliance was measured using the Working Alliance Inventory – Short Form (Tracey & Kokotovic, 1989), and was predictive of adherence, but this was not significant when Axis II (DSM-IV; American Psychiatric Association, 2000) personality disorder traits were controlled for. When participant resistance was higher, therapist adherence was found to be lower.

Brauhardt et al. (2014) examined adherence to CBT in recordings from 87 people with binge-eating disorder (BED). Adherence was assessed using the Adherence Control Form (ACF) which was developed to assess therapist adherence to CBT. The ACF consists of 10 items rated 0 = non adherent, 1 = partly adherent, or 2 = adherent. The mean adherence score was then derived for each session. High levels of adherence (classified as a mean of greater than 1.5) were found. Significant variability in adherence was found between, but not within therapists.

Puls et al. (2018) also used the ACF to assess adherence to CBT in the treatment of 64 adolescents with BED. Lower therapist adherence was found to be predicted by higher client treatment expectations, but not eating disorder psychopathology or depressive symptoms. Adherence was found to be positively associated with therapist/client alliance, but alliance was not associated with client treatment expectations, eating disorder psychopathology or depressive symptoms.

Sinai et al. (2012) studied adherence to IPT and supportive therapy for social anxiety disorder. They rated 133 recorded sessions from 53 participants using the CSPRS and Liebowitz Social Anxiety Scale. Interrater reliabilities were determined, using intraclass correlations, to be good or excellent. Significantly higher adherence scores overall were found on the IPT subscale than on the supportive therapy subscale for sessions of participants randomised to IPT, and significantly higher adherence scores overall were found on the supportive therapy subscale than the IPT subscale for sessions of participants randomised to supportive therapy. While there was a significant difference in adherence levels between the assigned and competing modalities, both frequently used techniques from the other modality. There was no difference in the middle phase between the two treatment groups on the IPT subscale.

Amole et al. (2016) conducted a study on adherence to IPT and brief supportive therapy (BSP). Adherence was measured using the CSPRS-Form 6 (Evans et al., 1984). Therapists were found to provide higher levels of IPT specific techniques for depression in the IPT treatment group and higher levels of BSP-specific techniques for depression in the BSP treatment group. It has been suggested that therapists may use less specific techniques as clients improve over time (Amole et al., 2016).

**Adherence over phase of therapy**

Therapist adherence has been found to change over the course of treatment. Adherence was found to decrease over time in CBT-E for bulimia nervosa in Folke et al.'s (2017) study. Adherence was rated using the Cognitive-Behavioural Therapy Treatment Protocol Adherence Scale, on which items were rated from 1-7. A decrease of approximately 0.23 units per ten sessions (23%) was found, indicating that adherence to treatment protocol decreased over time (Folke et al., 2017).

Lange et al. (2019) investigated parental perceptions of therapist adherence in 848 families receiving multisystemic therapy (MST) for antisocial adolescent behaviour. Adherence increased sharply during the earliest months of treatment with MST for antisocial adolescent behaviour and then stabilised. The sharper increase was associated with lower police contact and out of home placement immediately post-treatment, but not at the 18 month follow-up.

Brauhardt et al. (2014) measured therapist adherence to CBT for binge eating disorder using the ACF. Therapist adherence was not predicted by therapist or client characteristics. Adherence was found to vary between therapists, but not within. Adherence was not found to vary across phase of therapy.

Adherence over phases of CBT, IPT and SSCM for anorexia nervosa was investigated by McIntosh et al. (2016). Adherence was rated over early, middle and late phases, using a modified form of the CSPRS, the CSPRS-AN. No significant therapy by phase interaction was found for the IPT subscale. Therapist adherence to both CBT and SSCM were rated significantly higher in the middle phase, than in the early and late phases on the CBT subscale, with those randomised to CBT rating higher than those randomised to SSCM. Adherence to SSCM was significantly higher in the middle phase, than in the early and late phases on the SSCM subscale.

The variation of findings in previous research (Sinai et al., 2012; Brauhardt et al., 2014; McIntosh et al., 2016; Folke et al., 2017; Lange et al., 2019) of adherence over phase suggests that different psychotherapies may be implemented differently, with the extent to which therapists adhere to specific treatment modalities varying.

**Comparison of Cognitive Therapies Study**

Carter et al. (2013) conducted a randomised, controlled trial to investigate the viability of schema therapy as an alternative to cognitive behavioural therapy for

depression. In Carter et al.'s study, schema therapy and cognitive behavioural therapy produced comparable outcomes, with 34% of schema therapy participants and 28% of cognitive behavioural therapy participants in remission at the end of weekly sessions, and 50% of schema therapy participants and 40% of cognitive behavioural therapy participants in remission at the end of monthly sessions. Thirty-four percent of schema therapy participants and 38% of cognitive behavioural therapy participants met recovery criteria by the end of weekly sessions, and 56% of schema therapy participants and 50% of cognitive behavioural therapy participants met recovery criteria by the end of monthly sessions.

**Importance of proposed research**

The current study will build on Carter et al.'s (2013) research by investigating therapist adherence to CBT and schema therapy protocols. The current study will also investigate therapist adherence to CBT and schema therapy protocols over early, middle, and late phase sessions. A greater understanding is required of how and when therapists adhere to prescribed treatment modalities and factors which may cause adherence variation.

While it is currently understood that therapies such as CBT and schema therapy are effective in treating mental illnesses such as depression, there is less clarity as to what makes these therapies successful or unsuccessful. If high adherence is not maintained, it is difficult to determine if the particular therapy being implemented is responsible for the success or failure of therapy, or if another variable is impacting this outcome, therefore maintaining high adherence is essential for determining experimental validity.

Carter et al.'s (2013) research determined that CBT and schema therapy produced comparable outcomes in treating depression. The current study aims to build on this by examining therapist adherence scores on the CBT, schema therapy and non-specific (facilitative conditions and explicit directiveness) subscales of the CSPRS-CCT for CBT

and schema therapy sessions. The current study will use audio recordings of therapy sessions from Carter et al.'s study to determine whether CBT and schema therapy for depression can be differentiated using the modified form of the CSPRS and by examining how these adherence scores vary over treatment phase.

Some existing research investigates therapist adherence to various therapies for both depression and other psychological difficulties, such as anxiety disorders (Huppert et al., 2006; Sinai et al., 2012; Zickgraf et al., 2016), borderline personality disorder (Goldman & Gregory, 2009), anorexia nervosa (McIntosh et al., 2005; Andony et al, 2015; McIntosh et al, 2016), bulimia nervosa (Folk et al., 2017), binge eating disorder (Brauhardt et al., 2014; Puls et al., 2018), adolescent antisocial behaviour (Chapman & Schoenwald, 2011; Lange et al., 2017, 2019) and substance abuse (Hogue et al., 2008; Martino et al., 2008). Currently no research is known to have investigated therapist adherence to CBT and schema therapy for depression. A number of studies (Sinai et al., 2012; Brauhardt et al., 2014; McIntosh et al., 2016; Folke et al., 2017; Lange et al., 2019) have investigated how adherence varies over time and phase of therapy, however none have investigated changes over phase for either CBT or schema therapy in the treatment of depression, as in the present study.

**Research questions**

The main research questions for the current study are:

1. How does therapist adherence vary on the CSPRS-CCT subscales for CBT and schema therapy?
2. Does therapist adherence to CBT and schema therapy modalities change over therapy phase?
3. How consistent are raters in rating CBT and schema therapy sessions using the CSPRS-CCT in the current study?

## Objectives

There are three objectives of this study

1. To investigate therapist adherence to cognitive behavioural therapy and schema therapy protocols using the CSPRS-CCT.
2. To assess adherence over early, middle, and late phase sessions for both cognitive behavioural therapy and schema therapy protocols using the CSPRS-CCT.
3. To assess interrater reliability in rating adherence using the CSPRS-CCT.

## Hypotheses

1. Therapy sessions of participants randomised to CBT will have higher adherence scores on the CBT subscale than those randomised to schema therapy.
2. Therapy sessions of participants randomised to schema therapy will have higher adherence scores on the schema therapy subscale than those randomised to CBT.
3. Scores on the facilitative conditions and explicit directiveness subscales will not differ across therapy type.
4. Adherence to all subscales will be rated higher in the early to middle phases of treatment and will stabilise or decrease in the later stage in therapy, for participants in both CBT and schema therapy groups.

# Method

## Participants

Participants were 99 adults (females $n = 69$, males $n = 30$) who were part of Carter et al.'s (2013) randomised controlled trial comparing schema therapy and cognitive behavioural therapy for the treatment of depression. Participants were over the age of 18, with major depressive disorder as their principle current diagnosis. Participants attended weekly therapy sessions for six months, followed by monthly sessions for six months, at the Department of Psychological Medicine, University of Otago, Christchurch, in an outpatient clinical research unit. Participants were referred by a mental health service or general practitioner, or by self-referral.

Exclusion criteria for the trial were a history of mania or schizophrenia, current severe drug or alcohol dependence, major physical illness which could interfere with treatment, treatment with cognitive behavioural therapy or schema therapy in the past year and the use of any centrally acting drug in the previous fortnight (excluding the oral contraceptive pill or occasional sleeping tablet use).

## Protocol

Ethics approval was obtained for the original study from the Canterbury Ethics Committee in 2003 (Appendix B). An exemption was obtained from the University of Canterbury Human Ethics Committee (Appendix A) for use of the recordings in the present study as this had been approved in an earlier publication.

Consultation occurred with Māori iwi for the original clinical trial and documentation of this can be viewed in Appendix C. It was assessed that Māori cultural needs were taken into account and no further consultation was required for the current study.

**Measures**

Severity of participants' depressive symptoms was assessed using the Hamilton Depression Rating Scale (HDRS; Hamilton, 1960), Montgomery Asberg Depression Rating Scale (MADRS; Montgomery & Asberg 1979), Beck Depression Inventory (BDI-II; Beck, Steer, & Brown, 1996) and the Global Assessment of Functioning (GAF; Axis V of DSM-IV American Psychiatric Association, 2000). The MADRS, GAF and HDRS are clinician rated measures. The HDRS is rated on 17 items, eight of which use a five point scale (from 0 = absent to 4 = very severe) and nine of which use a three point scale (0 = absent, 1 = doubtful/mild, 2 = clearly present). A total score of 0-7 indicates normal mood, 8-13 mild depression, 14-18 moderate, 19-22 severe and above 23 indicates very severe depression (Hamilton, 1960).

The MADRS contains 10 items and is coded on a 0-6 scale. A total score of 0-6 indicates normal mood/recovered, 7-19 mild depression, 20-34 moderate and 35-60 severe depression (Snaith et al., 1986).

The BDI-II is a self-report questionnaire containing 21 items, ranked on a four-point (0-3) scale. A total score of 0-13 indicates minimal depression, 14–19 mild, 20–28 moderate and 29–63 indicates severe depression (Beck et al., 1996).

The GAF, Axis V of the fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR) measures the social, occupational and psychological functioning of an individual (American Psychiatric Association, 2000). The scale ranges from 1-100, with the lowest score range being 1-10 "persistent danger of severely hurting self or others (e.g., recurrent violence) OR persistent inability to maintain minimal personal hygiene OR serious suicidal act with clear expectation of death" and the highest being 91-100 "superior functioning in a wide range of activities, life's problems never seem to get out of hand, is sought out by others because of his/her many positive qualities. No symptoms." (American Psychiatric Association, 2000, p. 34).

A modified form of the Collaborative Study Psychotherapy Rating Scale (CSPRS) (Evans et al., 1984; Hill et al., 1992) was used to rate adherence to treatment modalities. The original CSPRS was designed to rate audio recordings of cognitive behavioural therapy, interpersonal psychotherapy, and clinical management with Imipramine or tablet placebo for depression (Hill et al., 1992). The form used in the current study was a modification of the CSPRS – Form 6 (Evans et al., 1984) and the CSPRS – Binge Eating Form (McIntosh et al., 2014). The CSPRS modified for the current study (CSPRS-CCT) incorporated items from the original CSPRS scale, and items from the CSPRS-BE which included a schema therapy subscale (McIntosh et al., 2014).

The CSPRS-CCT (Appendix D and Appendix E) comprises 78 items, with two subscales measuring adherence to CBT and schema therapy techniques. The *CBT* subscale contains 39 items and the *schema therapy* subscale contains 28 items. The remaining 12 items make up two therapy non-specific subscales – *facilitative conditions* and *explicit directiveness*. *Facilitative conditions* and *explicit directiveness* contain general items for measuring aspects of therapy that are not specific to a particular therapy type and are a measure of the working alliance between therapist and client. These would be expected to occur consistently across therapies. Carl Rogers first suggested facilitative conditions in 1951 during the development of the person-centred approach. The *facilitative conditions* subscale contains eight items, and the *explicit directiveness* subscale contains four. Between the *CBT* and *schema therapy* subscales, seven items overlapped. These are items common to both CBT and schema therapy, such as education about depression, negotiating therapy content and explanation for the therapist's direction. A visual representation of the CSPRS-CCT items and subscales can be seen in Figure 1.

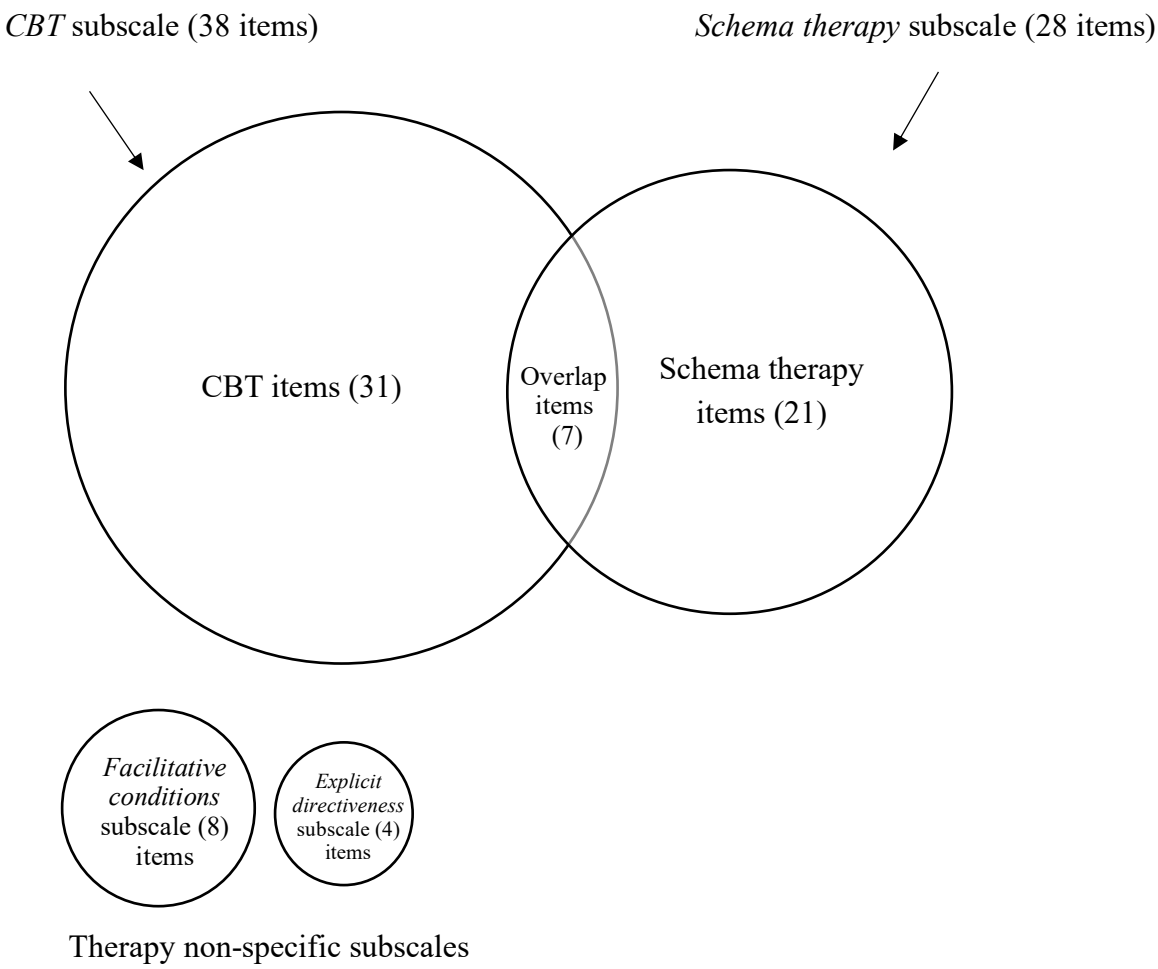


*Figure 1.* Diagram displaying subscales and items for the CSPRS-CCT.

**Rater training**

Raters were trained over three stages: Stage one involved didactic training, which included teaching about the therapies and rating instruments. Stage two was group rating of sessions with trainers. In stage three, sessions were independently rated and then reviewed with trainers. Co-rating occurred until raters' scores on CSPRS-CCT items were within one point of trainers' ratings. Weekly group review of co-rated sessions occurred throughout rating to maintain consistency among raters. Raters were unaware of the therapy the client was randomised to receive.

## Procedure

Three therapy sessions were randomly selected for each of the 99 participants, one from each of early (sessions one to five), middle, and late (last five sessions) phases of treatment. The first and last sessions were excluded from rating due to their idiosyncratic nature. Selected sessions were rated using the CSPRS-CCT to determine therapist adherence. Complete therapy sessions were listened to, after which the CSPRS-CCT rating scale was completed. Sixty-four sessions (approximately 20%) were randomly selected to be co-rated by a second independent rater to assess interrater reliability. Raters were postgraduate psychology students, clinical psychologists and clinical psychology graduate students.

## Data analysis

Data analyses were conducted using IBM Statistical Package for the Social Sciences Version 25 (SPSS; IBM Corporation, 2016).

Ten percent of entered data were checked for accuracy. Data were examined for normality by visual examination of the distributions, and using the Shapiro-Wilk test of normality.

Adherence for the two treatment groups was examined using independent samples t-tests, with therapy type (CBT and schema therapy) as the categorical independent variable, and adherence to therapy subscale (*schema therapy, CBT, facilitative conditions* and *explicit directiveness*) as the continuous dependent variables.

Adherence levels over the course of treatment were compared using repeated measures analyses of variance (ANOVA), with treatment phase (early, middle and late) as the categorical independent variable, and adherence to therapy subscale (*schema therapy, CBT, facilitative conditions* and *explicit directiveness*) as continuous dependent variables.

Mixed between-within subjects analyses of variance (ANOVA) were used to compare adherence levels over the course of treatment by therapy type (CBT and schema therapy), with therapy type as the categorical independent between-subjects variable, phase of therapy (early, middle and late) as the repeated measures variable, and the CSPRS-CCT subscales (*schema therapy, CBT, facilitative conditions* and *explicit directiveness*) as continuous dependent variables.

**Interrater reliability and internal consistency**

Intraclass correlations (ICCs) and coefficients of variation were used to determine interrater reliability. ICCs are one of the most common statistics reported when examining interrater reliability in ordinal, ratio or interval data (Hallgren, 2012), while coefficients of variation are more reliable measures when variability is low among a set of ratings. Interrater reliabilities were examined for the pairs of dual rated sessions, with both intraclass correlations and coefficients of variation calculated for each of the CSPRS-CCT subscales. Random effects two-way models of absolute agreement intraclass correlation coefficients were calculated (Shrout & Fleiss, 1979).

Cronbach's alpha was used as a measure of internal consistency for CSPRS-CCT subscales. Internal consistency is a type of scale reliability, the degree to which a scale consistently measures a construct. According to Tavakol and Dennick (2011), Cronbach's alpha is the measure of reliability most commonly used.

## Results

Data were found to be non-normally distributed for all CSPRS-CCT subscales except the *facilitative conditions* subscale. Transformation was attempted, but the data remained non-normal. Due to the large sample size (greater than 30 participants) parametric tests were used for all analyses (Pallant, 2013). Fagerland (2012) studied the use of t-tests and their non-parametric equivalent, the Wilcoxon-Mann-Whitney test (also known as the Mann-Whitney U test) and concluded that non-parametric tests are preferable with smaller sample sizes, while t-tests are preferable for larger samples, even with heavily skewed data. Blanca, Alarcón et al., (2017) found that the *F*-test, used in repeated measures analysis of variance, was robust even with severe deviation from normality across various sample sizes in controlling type I errors (rejection of a true null hypothesis). A non-parametric version of a mixed between-within subjects ANOVA also does not exist. Due to these factors, parametric tests were used, despite the non-normality of distributions.

Table 1 displays demographic data for the sample. Nearly 70% were female, with the mean age being 38.5 years. Most participants (84.8%) identified as New Zealand European, 4% as New Zealand Māori, 8.1% as non-New Zealand European, and 3% as other (Japanese, Egyptian and Samoan). Over half (51.5%) were currently married.

Table 2 shows that the average age at first onset of major depression was 22 years for the sample. A single episode of depression had been experienced by a quarter of the sample, with two-thirds having experienced recurrent episodes. Ten percent of the sample was experiencing mild, over two-thirds moderate and 12.1% were experiencing severe depression.

Table 1

*Sample Sex, Age, Ethnicity and Marital Status (n = 99)*

| | Total sample | |
|---|---|---|
| | *n/x* | *%/sd* |
| Female | 69.0 | 69.7 |
| Age | 38.5 | 11.3 |
| Ethnicity | | |
| NZ European | 84 | 84.8 |
| Māori | 4 | 4.0 |
| Non-NZ European | 8 | 8.1 |
| Other (Japanese, Egyptian, Samoan) | 3 | 3.0 |
| Married | 51 | 51.5 |

Table 2

*Depression History of Sample (n = 99)*

| | Total sample | |
|---|---|---|
| | *n/x* | *%/sd* |
| Depression age at first onset | 22.0 | 11.5 |
| Number of depressive episodes | | |
| Single episode | 25 | 25.3 |
| Recurrent | 66 | 66.7 |
| No data | 8 | 8.1 |
| Current depression severity | | |
| Mild | 10 | 10.1 |
| Moderate | 69 | 69.7 |
| Severe (without psychotic features) | 12 | 12.1 |
| No data | 8 | 8.1 |

Table 3 shows the comorbid and general psychopathology of participants prior to beginning treatment. Generalised anxiety disorder (GAD) was the most common comorbid anxiety disorder, with 35.4% of the sample having current GAD. Social phobia and panic disorder were also highly comorbid, with 29.3% of the sample having current social phobia and 31.3% at some point in their life. Fifteen percent of the sample had current panic disorder and 29.3% at some point in their life. Bulimia nervosa was the most common eating disorder over the lifetime of participants at 9.1%, and binge eating disorder was the most common current eating disorder at 4%. Eight percent had bipolar II disorder and over one third had been diagnosed with some form of personality disorder. The mean score on the HDRS was 16.3, 23.2 on the MADRS, and 26.4 on the BDI-II, all indicating moderate depression (Hamilton, 1960; Snaith et al., 1986; Jackson-Koku, 2016). The mean GAF score was 55.2, indicating moderate symptoms, or moderate difficulty in social and occupational functioning (American Psychiatric Association, 2000). A previous suicide attempt was reported by 26.3% of the sample, and previous self-harm by 25.3%. Current alcohol abuse or dependence was reported by 13.1% of participants and by 35.4% of participants at some time in their life. Current drug abuse or dependence was reported by 3% of participants and at some time in their life by 18.2% of participants.

Table 4 displays means, standard deviations and statistics comparing the two therapy groups on each of the CSPRS-CCT subscales, *CBT, schema therapy, facilitative conditions* and *explicit directiveness.* For the *CBT* subscale those randomised to CBT scored significantly higher than those randomised to schema therapy ($t$ = -11.28, $p < .001$, eta squared = .29). For the *schema therapy* subscale those randomised to schema therapy scored significantly higher than those randomised to CBT ($t$ = 13.46, $p < .001$, eta squared = .46). No difference was found between the two treatment groups on the therapy non-specific *facilitative conditions* or *explicit directiveness* subscales. Participants randomised to CBT scored significantly higher on the overlap items (items common to *CBT* and

*schema therapy* subscales) than those randomised to schema therapy ($t$ = -4.05, $p$ < .001, eta squared = .05). Figure 2 represents CSPRS-CCT subscale scores for the two therapy groups.

Table 5 displays means, standard deviations and results of statistical analyses for each of the CSPRS-CCT subscales by phase of therapy and therapy group. A therapy by phase interaction was found for the *CBT* subscale (F = 6.73, $p$ = .002, *partial eta squared* = .14). The effect size of .14 indicates a large effect size. Figure 3 shows this interaction graphically. Scores on the *CBT* subscale are consistently lower for the schema therapy group than for the CBT group over the three phases of therapy, with the schema therapy group's scores increasing slightly over the three phases of therapy, whereas scores for the CBT group decrease over therapy, with the highest mean score in phase one, intermediate in phase two, and lowest in phase three.

A therapy by phase interaction approached significance for the *schema therapy* subscale (F = 3.02, $p$ = .05, *partial eta squared* = .07). Scores on the *schema therapy* subscale for the CBT group remain consistent over the phases and are lower than for the schema therapy group over the three phases of therapy. *Schema therapy* subscale scores for the schema therapy group are slightly lower in phase one than in phases two and three which are stable.

No therapy by phase interaction was found for the therapy non-specific subscales, *facilitative conditions* (F = .07, $p$ = .93, *partial eta squared* = .002) or *explicit directiveness* (F = .82, $p$ = .44, *partial eta squared* = .02), or for the overlap items (F = .95, $p$ = .39, *partial eta squared* = .02).

Table 6 displays means, standard deviations and statistics for each of the CSPRS-CCT subscales by phase of therapy for the total sample. A significant difference among phases was found for the *facilitative conditions* subscale ($F$ = 16.20, $p$ < .001, *partial eta squared* = .28), with an effect size of .28 indicating a large effect size. Post-hoc tests

indicated phase 3 was significantly higher than both phases 1 ($t$ = -.38, $p$ < .001) and 2 ($t$ = -.23, $p$ = .001), but no difference was found between phases 1 and 2 ($t$ = -.15 $p$ > .05). This difference among phases is shown visually in Figure 4. No analysis of phase was conducted for the CBT subscale, due to the presence of a therapy by phase interaction for this subscale, as reported in Table 5 and illustrated in Figure 3. No significant differences among phases were found for the other CSPRS-CCT subscales.

Interrater reliability was measured in the present study using both intraclass correlations and coefficients of variation. Koo and Li (2016) have reported that ICC values less than .5 indicate poor interrater reliability, values between .5 and .75 moderate, between .75 and .9 good, and greater than .9 excellent reliability. As seen in Table 7 values in the present study indicate good reliability for the *CBT* subscale (.77), *schema therapy* subscale (.86) and poor reliability for the *facilitative conditions* (.44) and *explicit directiveness* (.09) subscales.

Coefficients of variation for the CSPRS-CCT are all low, ranging from 6.9% (facilitative conditions subscale) to 13.4% (explicit directiveness subscale), indicating minimal variation between raters on each of the subscales, with the highest average variation being in the *explicit directiveness* subscale.

Cronbach's alpha was calculated to measure the internal consistency of the CSPRS-CCT subscales. Internal consistency refers to how closely related each of the items are in each of the subscales. An alpha value of .7 - .95 (Tavakol & Dennick, 2011) is deemed acceptable interrelatedness, although anything over .90 may be considered too high (Streiner, 2003). Alpha scores were acceptable for all but the *explicit directiveness* subscale (.50).

Table 3

*Comorbid Psychopathology, General Psychopathology, Self-Harm, Suicide Attempts, and Alcohol and Drug Abuse and Dependence Pre-Treatment of the Sample of 99 Participants.*

| | *n/x* | *%/sd* |
|---|---|---|
| Comorbid psychopathology | | |
| Anxiety disorder | | |
| Generalised anxiety disorder – past month | 35 | 35.4 |
| Panic disorder – past month | 15 | 15.2 |
| – lifetime | 29 | 29.3 |
| Agoraphobia without panic disorder – past month | 1 | 1.0 |
| – lifetime | 1 | 1.0 |
| Social phobia – past month | 29 | 29.3 |
| – lifetime | 31 | 31.3 |
| Specific phobia – past month | 13 | 13.1 |
| – lifetime | 16 | 16.2 |
| Obsessive compulsive disorder – past month | 2 | 2.0 |
| – lifetime | 5 | 5.1 |
| Post-traumatic stress disorder – past month | 11 | 11.1 |
| – lifetime | 17 | 17.2 |
| Bipolar II – past month | 8 | 8.1 |
| – lifetime | 8 | 8.1 |
| Eating disorder | | |
| Anorexia nervosa – past month | 0 | 0 |
| – lifetime | 1 | 1.0 |
| Bulimia nervosa – past month | 3 | 3.0 |
| – lifetime | 9 | 9.1 |
| Binge eating disorder – past month | 4 | 4.0 |
| – lifetime | 4 | 4.0 |
| Personality disorder diagnosis (any) | 35 | 35.4 |
| General psychopathology | | |
| Hamilton Depression Rating Scale (17 item) | 16.3 | 5.3 |
| Montgomery Asberg Depression Rating Scale | 23.2 | 6.5 |
| Beck Depression Inventory-II | 26.4 | 9.6 |
| Global Assessment of Functioning | 55.2 | 9.4 |
| Other | | |
| Previous self-harm | 25 | 25.3 |
| Previous suicide attempt | 26 | 26.3 |
| Alcohol abuse/dependence – past month | 13 | 13.1 |
| Alcohol abuse/dependence – lifetime | 35 | 35.4 |
| Other drug abuse/dependence – past month | 3 | 3.0 |
| Other drug abuse/dependence – lifetime | 18 | 18.2 |

Table 4

*Means, Standard Deviations and Statistics of Collaborative Study Psychotherapy Rating Scale – Comparison of Cognitive Therapies Subscales for Participants Randomised to CBT and Schema Therapy.*

| | CBT (n = 158) | | Schema therapy (n = 155) | | *t* | *p* | Mean diff | 95% CI | Effect size (eta squared) |
|---|---|---|---|---|---|---|---|---|---|
| | *m* | *sd* | *m* | *sd* | | | | | |
| CBT subscale | 2.44 | .62 | 1.80 | .36 | -11.28 | **< .001** | -.64 | [-.76 , -.53] | .29 |
| Schema therapy subscale | 1.63 | .23 | 2.23 | .51 | 13.46 | **< .001** | .61 | [.52 , .69] | .37 |
| Overlap items (common to schema therapy and CBT) | 3.08 | .66 | 2.78 | .63 | -4.05 | **< .001** | -.30 | [-.44 , -.15] | .05 |
| Facilitative conditions subscale | 5.02 | .55 | 5.13 | .59 | 1.69 | .09 | .11 | [-.02 , .24] | .01 |
| Explicit directiveness subscale | 3.90 | .63 | 3.77 | .64 | -1.75 | .08 | -.12 | [-.26 , .02] | .01 |

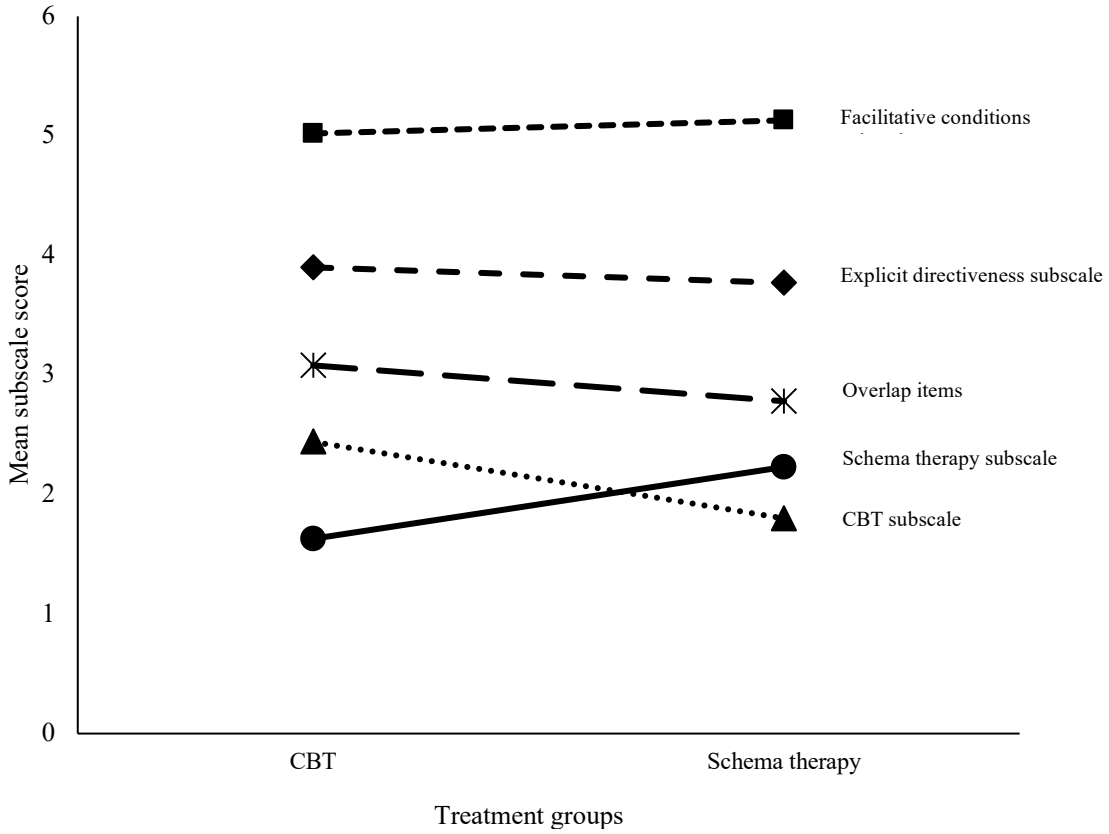


*Figure 2.* Mean Collaborative Study Psychotherapy Rating Scale – Comparison of Cognitive Therapies subscale scores for participants randomised to CBT and schema therapy.

Table 5

*Collaborative Study Psychotherapy Rating Scale – Comparison of Cognitive Therapies Subscale Scores by Phase for Therapy Group*

| | Schema therapy (n = 43) | | | CBT (n = 41) | | | Phase x therapy interaction | | |
|---|---|---|---|---|---|---|---|---|---|
| | Phase 1 x (sd) | Phase 2 x (sd) | Phase 3 x (sd) | Phase 1 x (sd) | Phase 2 x (sd) | Phase 3 x (sd) | F | *p* | Effect size (partial eta squared) |
| CBT subscale | 1.75 (.38) | 1.80 (.38) | 1.84 (.36) | 2.64 (.55) | 2.48 (.64) | 2.27 (.66) | **6.73** | **< .001** | .14 |
| Schema therapy subscale | 2.11 (.50) | 2.31 (.52) | 2.28 (.49) | 1.62 (.22) | 1.59 (.25) | 1.62 (.24) | 3.02 | .05 | .07 |
| Overlap items (common to CBT and schema therapy) | 2.74 (.75) | 2.69 (.56) | 2.85 (.56) | 3.08 (.70) | 2.99 (.58) | 2.96 (.66) | .95 | .39 | .02 |
| Facilitative conditions subscale | 4.91 (.52) | 5.06 (.53) | 5.31 (.59) | 4.88 (.48) | 5.02 (.60) | 5.24 (.53) | .07 | .93 | .00 |
| Explicit directiveness subscale | 3.90 (.63) | 3.66 (.54) | 3.72 (.75) | 3.89 (.62) | 3.79 (.55) | 3.95 (.69) | .82 | .44 | .02 |

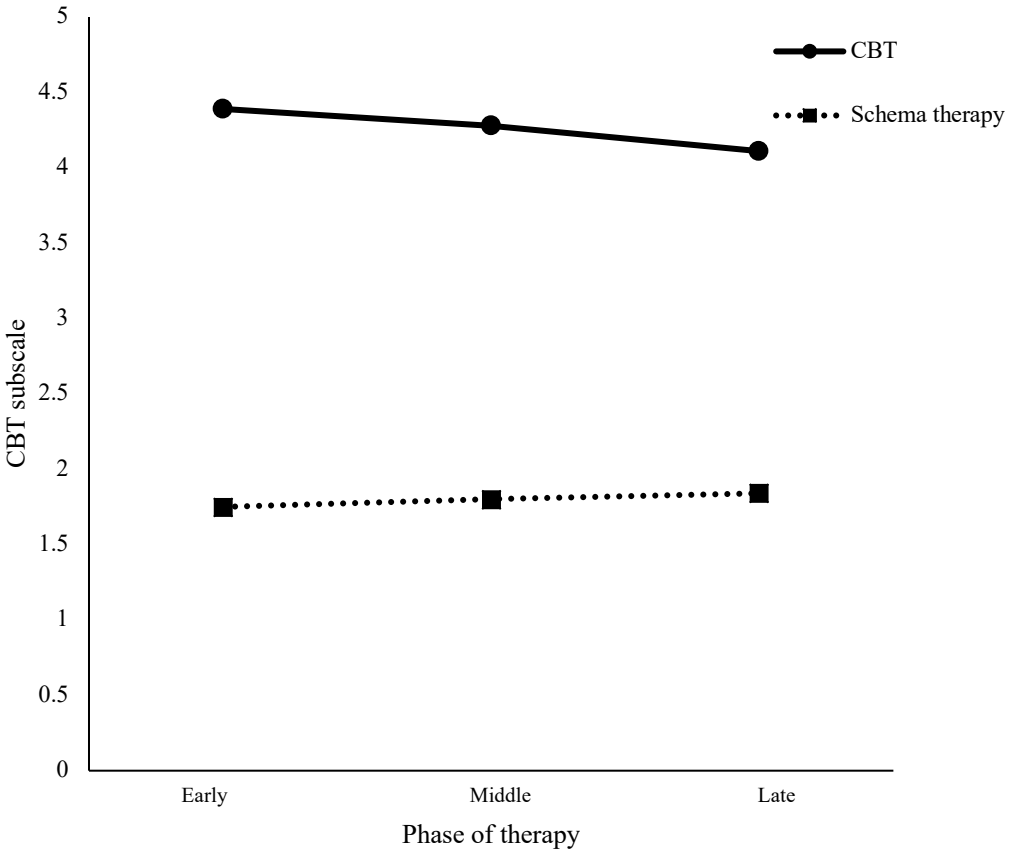


*Figure 3.* Mean CBT subscale scores for CBT and schema therapy groups over early, middle and late phases of therapy.

Table 6

*Collaborative Study Psychotherapy Rating Scale – Comparison of Cognitive Therapies Subscale Scores by Phase of Therapy*

| | Phase 1 x (sd) | Phase 2 x (sd) | Phase 3 x (sd) | *F* | *p* | Effect size (partial eta squared) |
|---|---|---|---|---|---|---|
| Schema therapy subscale | 1.87 (.46) | 1.96 (.55) | 1.96 (.51) | 1.75 | .18 | .04 |
| Overlap items (common to schema therapy and CBT) | 2.91 (.74) | 2.84 (.58) | 2.90 (.61) | .59 | .56 | .01 |
| Facilitative conditions subscale | 4.90[a] (.50) | 5.04[a] (.56) | 5.28[b] (.56) | 16.20 | **< .001** | .28 |
| Explicit directiveness subscale | 3.89 (.62) | 3.73 (.55) | 3.82 (.73) | 2.54 | .09 | .06 |

*Note:* means followed by the same superscript letter are not significantly different. Analysis for CBT subscale not completed due to the presence of a therapy x phase interaction for this subscale.

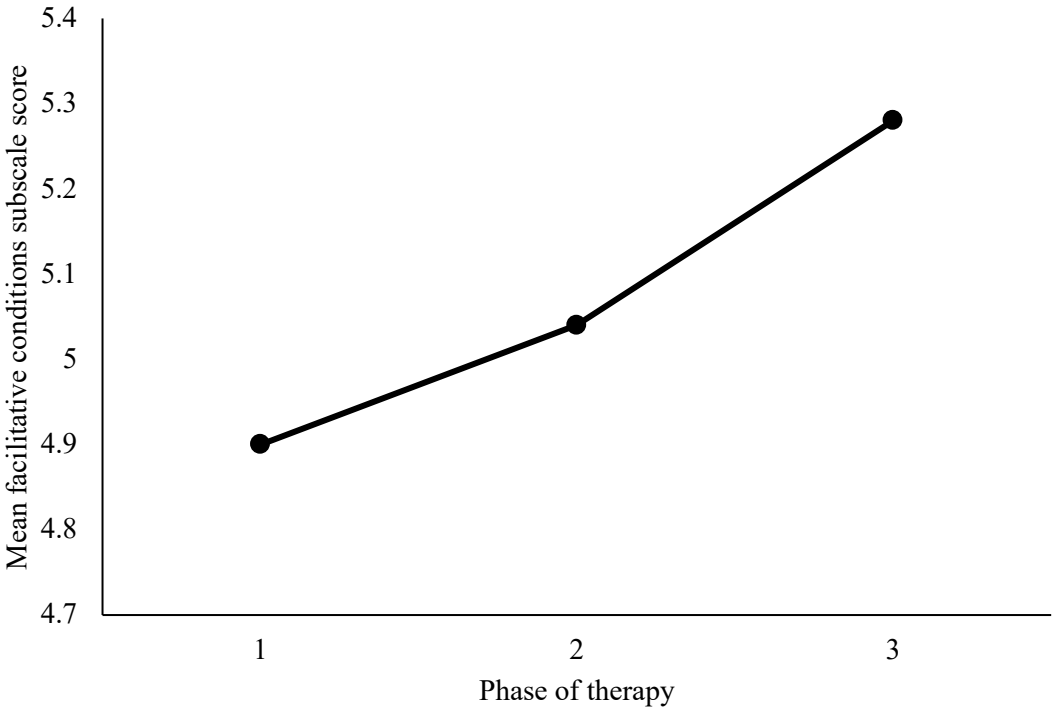


*Figure 4.* Mean facilitative conditions subscale scores by phase of therapy for the total sample.

Table 7

*Intraclass Correlations and Internal Consistency for the Collaborative Study Psychotherapy Rating Scale – Comparison of Cognitive Therapies for the Total Sample.*

| | Interrater reliability | | Internal consistency - Cronbach's α |
|---|---|---|---|
| | Intraclass correlation coefficient | Coefficients of variation (%) | |
| CBT subscale | .77 | 13.2 | .85 |
| Schema therapy subscale | .86 | 10.6 | .84 |
| Facilitative conditions | .44 | 6.9 | .73 |
| Explicit directiveness | .09 | 13.4 | .50 |

## Discussion

Aims of the present study were to investigate therapist adherence to cognitive behavioural therapy and schema therapy protocols using the CSPRS-CCT; to examine adherence over early, middle, and late phase sessions for both cognitive behavioural therapy and schema therapy protocols using the CSPRS-CCT; and to assess interrater reliability in rating adherence using the CSPRS-CCT.

In the present study the CBT group scored higher than the schema therapy group on the *CBT* subscale, while the schema therapy group scored higher on the *schema therapy* subscale. Interestingly the CBT group also scored higher on the overlap items. A therapy by phase interaction was found for the *CBT subscale* with adherence to CBT decreasing over phase. No other significant interactions were found. Intraclass correlation coefficients were all good (Koo & Li, 2016), with the exception of coefficients for the *facilitative conditions* and *explicit directiveness* subscales. Coefficients of variation were all excellent, with the highest being 13.6% for the overlap items. Alpha values for all subscales were in the acceptable range of .70 - .90 (Streiner, 2003; Tavakol & Dennick, 2011) with the exception of the overlap items and the *explicit directiveness* subscale which had alpha values of .41 and .50.

Three research questions were posed for the present study, the first of which was *how does therapist adherence vary on the CSPRS-CCT subscales for CBT and schema therapy?* Based on previous research by Hill et al. (1992), McIntosh et al. (2005) and Amole et al. (2016), who found greater use of therapy specific techniques in their respective modalities than in other modalities, it was hypothesised that therapy for those randomised to CBT would have higher adherence scores on the *CBT* subscale than for those randomised to schema therapy, while therapy for those randomised to schema therapy would have higher adherence scores on the *schema therapy* subscale than for those randomised to CBT.

As hypothesised, and in line with previous research (Hill et al., 1992; McIntosh et al., 2005; Amole et al., 2016), those randomised to CBT scored higher on the *CBT* subscale, while those randomised to schema therapy scored higher on the *schema therapy* subscale. Those randomised to CBT also scored higher on the overlap items.

CBT begins with an assessment and engagement phase and then focuses on identifying and changing underlying automatic thoughts which influence and are influenced by feelings and behaviours. Schema therapy, while incorporating elements of CBT, also focuses on identifying and challenging maladaptive schemas which have developed in early life. The early phase of schema therapy treatment involves assessment and education, as does CBT. Client and therapist later move into treatment using cognitive strategies such as examining evidence for and against the schema, generating healthy responses to schemas and keeping schema diaries; using experiential strategies such as imagery and schema dialogues; and through behavioural pattern breaking (Young et al., 2003). This means there will be some similarities between the therapy modalities, such as education about depression, negotiating therapy content and explanation for the therapist's direction. However while overlap implies that these items may occur in both therapies, it does not mean that they would be expected to occur equally. In the present study, the CBT group has higher scores on overlap items than the schema therapy group. For example, at the beginning of a CBT session an agenda is usually created by negotiation between therapist and client (Beck, 2011). This negotiation of therapy content may also occur in schema therapy, but may not be as explicit as in CBT.

Adherence scores on the *facilitative conditions* and *explicit directiveness* subscales were also hypothesised to be similar between therapies. As expected, there were no differences between the CBT and schema therapy groups on either *facilitative conditions* or *explicit directiveness* subscales. This finding is not surprising as the

*facilitative conditions* and *explicit directiveness* subscales contain items measuring aspects of therapy such as therapist empathy, warmth, guidance and receptive listening, which are not specific to a particular therapy type, but are common indicators of good alliance between therapist and client and would be expected to occur across all therapies.

Facilitative conditions were first suggested by Carl Rogers in 1951 as part of his person centred therapy approach and included congruence, unconditional positive regard and empathy. Rogers later expanded this in his 1957 work, suggesting that six conditions are needed in therapy to achieve constructive change over time, including two people who are in psychological contact, one of which is the client who is vulnerable and the other the therapist. The therapist should experience unconditional positive regard and be empathic towards the client. Positive regard and empathy should be communicated to the client (Rogers, 1957).

Facilitative conditions were measured in the current study using eight items and explicit directiveness (the therapist's guidance of the session) was measured using four items. Both facilitative conditions and explicit directiveness are aspects of the alliance between therapist and client, which has been found to be an important predictor of outcome in cognitive therapies. The alliance between therapist and client measured over multiple sessions was found to be a stronger predictor of outcome than alliance measured at only one stage of therapy in research by Crits-Cristoph et al. (2011), while Arnow et al. (2013) found that strong alliance early in therapy predicted greater symptom reduction in two therapies for depression.

The second question posed was *does therapist adherence to CBT and schema therapy modalities change over therapy phase?* It was hypothesised, based on research by McIntosh et al. (2016), who found that therapist adherence to CBT and SSCM was rated significantly higher in the middle phase, Folke et al. (2017) who found that

adherence to CBT-E was highest in the earlier phase of therapy and steadily decreased over time, and Lange et al. (2019) who found a sharp increase in adherence in the early months of treatment with multisystemic therapy followed by stabilisation of adherence, that adherence would be rated higher in the early to middle phases of treatment and would stabilise or decrease in the later stage of treatment for both CBT and schema therapy groups. Amole et al. (2016) have suggested adherence may decrease over phase as the client's symptoms improve and fewer therapeutic techniques are required. Later stages of CBT and schema therapy focus less on introducing new psychotherapy techniques, instead focusing on practising those already learnt and maintaining progress (Beck et al., 1979; Young et al., 2003).

In the present study a therapy by phase interaction was found for the *CBT* subscale, with adherence to CBT decreasing over phase. The finding of a therapy by phase interaction for the *CBT* subscale is consistent with the above hypothesis and with previous research by McIntosh et al. (2016), who found a therapy by phase interaction for CBT, although they found that adherence was highest in the middle phase and by Folke et al. (2017), who found that adherence to CBT-E decreased over time in the treatment of bulimia nervosa. This may be due to the therapist being more likely to adhere strictly to CBT modalities in the earlier phase of therapy when the client is exhibiting greater depressive symptoms.

This is not the case for the *schema therapy* subscale in the present study, as no therapy by phase interaction was found. This may indicate that adherence to schema therapy modalities differs from adherence to CBT modalities in that adherence remains constant across phases of schema therapy, compared to CBT in which adherence has been found to decrease over time. In schema therapy, time is spent in early sessions identifying maladaptive schemas and modes, and in later sessions is spent challenging these maladaptive schemas/modes and building on healthy schemas (Young et al.,

2003), whereas in CBT, as sessions progress, clients are more able to identify and challenge automatic thoughts on their own and sessions in the later phase may focus more on maintaining these skills, rather than introducing new CBT techniques.

For the sample as a whole, a significant phase effect was found for the *facilitative conditions* subscale, with adherence in phases one and two significantly lower than in phase three and no difference between phase one and phase two. The *facilitative conditions* subscale measures alliance between therapist and client. By the final phase of therapy the therapist and client have been working together for several months and would therefore be expected to have developed a strong working alliance.

The third question posed was *how consistent are raters in rating CBT and schema therapy sessions using the CSPRS-CCT in this study?* This question was assessed by calculating ICCs (Shrout & Fleiss, 1979) and coefficients of variation to measure interrater reliability. ICCs are measured on a scale from 0 to 1. Zero represents no reliability and 1 represents perfect reliability with no error. According to Koo & Li (2016), ICCs above 0.5 represent moderate reliability, above 0.7 good, and above 0.9 excellent reliability. The coefficient of variation is a unit-free measure of dispersion which represents the ratio of the standard deviation to the mean and is thus a simpler statistic. A coefficient of variation below 25% represents low levels of dispersion around the mean for paired ratings and is considered to indicate high agreement between raters.

ICCs for subscales of the CSPRS-CCT were found to be good, between .70 and .90 (Koo & Li, 2016), with the exception of coefficients for the *facilitative conditions* and *explicit directiveness* subscales. When variability is low in a set of ratings, reflecting restricted range or a skewed distribution, intraclass correlations underestimate the agreement among pairs of raters. An example of this is given in a scenario discussed by Hallgren (2012). In two hypothetical studies of therapist empathy, one study's

sample is from a community clinic and the second study's sample is drawn from a university clinic. Empathy ratings from the community clinic were normally distributed and ICCs were high. Empathy ratings from the university clinic where therapists were highly trained and closely supervised, were restricted to the upper end of the rating scale. This resulted in a skewed distribution and lower ICC values.

In the current study, the ICCs reflecting poor interrater agreement for the *facilitative conditions* and *explicit directiveness* subscales are comparable to the hypothetical example by Hallgren (2012). All participating therapists were highly trained clinical psychologists treating clients in a university clinic as part of a randomised controlled trial and would be expected to display high levels of aspects measured by these subscales such as warmth, empathy, guidance and receptiveness. Low rating variability and skewed distributions are evident in both the *facilitative conditions* and *explicit directiveness* subscales. For example, for the item *warmth,* no ratings of 1 (not at all) or 2 (very little) and only one rating of 3 was given, whereas 20 ratings of 4, 132 ratings of 5, 129 ratings of 6 and 45 ratings of 7 (very much) were given, resulting in a highly skewed distribution. Intraclass correlation coefficients take into account both distribution of the data and interrater agreement, with more heavily skewed distributions impacting on calculation of ICCs (Hallgren, 2012; Mehta et al., 2017). When working with a skewed distribution, coefficients of variation are a more appropriate statistic to use to examine interrater agreement. All coefficients of variation in the present study were excellent. This indicates the mean variation between raters on each of the subscales was low, with the highest being 13.4% for the *explicit directiveness* subscale, all indicating excellent consistency between pairs of raters.

Internal consistency is a measure of the inter-relatedness of items in a scale. Internal consistency was measured for each of the subscales in the present study using Cronbach's alpha. Cronbach's alpha values were found to be acceptable, indicating a

high degree of item inter-relatedness for all of the subscales except the *explicit directiveness* subscale with an alpha value of .50. The low alpha value for the *explicit directiveness* subscale is likely due to the small number of items making up this subscale (four items only). Tavakol and Dennick (2011) indicate that a small number of items in a test can result in decreased Cronbach's alpha values.

**Strengths and Limitations**

The present study has a number of strengths. Therapy sessions were randomly selected from a large sample of 99 participants, therefore, while data were not normally distributed, and were unable to be transformed to approximate a normal distribution, the relatively large sample size allowed parametric data analytic methods to be used.

Full therapy sessions were rated for all participants over the phases of therapy, meaning the ratings are a good reflection of therapist adherence throughout entire sessions and over time for all participants. Previous studies have examined adherence with small sections of sessions (Goldman & Gregory, 2009), a randomly selected group of participants from the total study (Huppert et al., 2006), or from only one therapy session per participant, often in the early stages of therapy (Barber et al., 1996; Weck et al., 2013; Zickgraf et al., 2016). By examining adherence for all participants and from entire sessions over different phases of therapy, ratings in the present study are a good reflection of adherence throughout the entire therapy process for each participant, rather than a snapshot at only one particular point in therapy.

Sixty-four therapy sessions were randomly selected to be co-rated for interrater reliability, with good interrater reliabilities found. Intraclass correlation coefficients ranged between moderate and good for CBT and schema therapy subscales but not for the non-specific (*explicit directiveness* and *facilitative conditions*) subscales. Low coefficients of variation were found for all subscales. This is a strength of the present

study as good interrater reliability indicates consistency among raters when using the CSPRS-CCT.

Another strength of this study is the greater number of female participants (70%). This is reflective of depression rates by sex in the wider New Zealand population. In the 2018/2019 New Zealand Health Survey 20.3% of women had been diagnosed with depression, compared with 11.0% of men. Women were found to have higher rates of depression across all age groups (Ministry of Health, 2019).

A limitation of the present study is the representation of ethnic minorities. Ethnicity in the present study was largely New Zealand European (84.4%) and non-New Zealand European (8.1%), with 4% Māori. In the 2013 New Zealand census, 74% of people identified as being of European descent, 14.9% as Māori, 11.8% as Asian, 7.4% as Pacific, and 1.2% as Middle Eastern/Latin American/African (Statistics New Zealand, 2013). While the present study does include some ethnic minorities, 4% Māori and 3% Japanese, Egyptian and Samoan, this is lower than the actual representation of these minorities in the New Zealand population as a whole, which may limit the generalisability of the present study. Seventy percent of participants had moderate depression, meaning there is potential for results to vary if a larger proportion of the sample was experiencing mild or severe depression.

**Implications**

Adherence to CBT, as shown by scores on the CBT subscale, was found to change over phase for the CBT group, with adherence highest in the early phase and lower over middle and late phases. This finding is in line with the hypothesis that adherence to therapy modalities would be initially higher and then decrease as therapy progressed and is consistent with findings from previous research. For example

McIntosh et al., (2016) found that adherence to CBT and SSCM for anorexia nervosa was highest in the middle phase, Folke et al. (2017) found that adherence to CBT-E for bulimia nervosa decreased over phase and Lange et al. (2019) found that adherence to multisystemic therapy for adolescent antisocial behaviour initially increased rapidly and then stabilised.

For the schema therapy subscale, the therapy by phase interaction approached, but did not quite reach the level of statistical significance, $p < .05$, indicating that the pattern over the three phases of therapy was somewhat different for the two treatment groups. When examining the means for the schema therapy group adherence was found to be lower in the first phase, rose in the middle phase and then plateaued over the final phase of therapy. For those randomised to CBT, adherence to the schema therapy subscale revealed substantially lower mean scores, which were relatively stable over all phases. Not surprisingly, due to the combining of these two samples, examination of the main effect of phase on the schema therapy subscale for the total sample revealed no change in adherence to schema therapy over the phases of therapy. This is unsurprising as the early phase of schema therapy is spent introducing the client to treatment and assessing which schemas have developed in early life, while the middle and late phase focus on using experiential strategies and behavioural pattern breaking (Young et al., 2003).

This does not support the hypothesis that adherence to therapy modalities would be highest in the early phase and then decrease over the middle to late phase. However research by Brauhardt et al. (2014) did not find variation in adherence over treatment phase in CBT for binge eating disorder and McIntosh et al. (2016) found no therapy by phase interaction in adherence to IPT for anorexia nervosa. The findings of no variation in adherence over phase for Brauhardt et al. (2014) and McIntosh et al. (2016) are supported by the findings for schema therapy adherence over phase in the present study.

These findings indicate there may be differences in delivery of different therapies, for example greater adherence to CBT modalities may be more important in the earlier phase of CBT, whereas having consistent adherence overtime may be more important when delivering schema therapy.

**Future directions**

The effect of phase on outcome needs to be studied. Previous studies have found that adherence may vary across phase (McIntosh et al., 2016; Folke et al., 2017; and Lange, et al., 2018), however these changes over phase appear to vary between therapy type, with a study by Brauhardt et al. (2014) finding no variation of adherence over phase in their study of CBT for binge-eating disorder. In the present study, variability over phase was found for CBT but not for schema therapy. Higher adherence was found in the early phase which decreased in middle and late phases. Research needs to be conducted to determine whether it is important to have high adherence in all phases, or whether one phase is more important than the others. This was not able to be determined in this study as adherence was relatively high for all sessions.

**Conclusion**

Understanding adherence both provides insight into how therapies are delivered and determines that therapies are being delivered correctly. The present study found that CBT and schema therapy are distinguishable using the CSPRS-CCT to rate therapist adherence to treatment modalities. This indicates that the CSPRS-CCT is a reliable way to distinguish between the two therapies.

The present study also determined that there were differences in adherence levels over therapy phase for CBT on the *CBT* subscale, with adherence levels being highest in the early phase, and then decreasing over middle and late phases. The therapy

by phase interaction for the schema therapy subscale approached, but did not reach significance.

The CSPRS-CCT was found to have good reliability in measuring adherence to CBT and schema therapy modalities.

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## Appendix A

HUMAN ETHICS COMMITTEE

Secretary, Rebecca Robinson
Telephone: +64 03 369 4588, Extn 94588
Email: human-ethics@canterbury.ac.nz

UNIVERSITY OF CANTERBURY
*Te Whare Wānanga o Waitaha*
CHRISTCHURCH NEW ZEALAND

2018/05/EX

21 August 2018

Annalice Rayner
Psychology
University of Canterbury

Dear Annalice,

I can confirm that your request for an exemption for the research project titled "Therapist Adherence to Schema Therapy and Cognitive Behavioural Therapy" has been reviewed and approved by the Human Ethics Committee.

Yours sincerely

R. Robinson

*pp.*

Professor Jane Maidment
***Chair***
***University of Canterbury Human Ethics Committee***



Appendix B

**Canterbury Ethics Committee**
4th Floor, 250 Oxford Terrace
P.O. Box 3877
Christchurch
Phone (03) 372 3018
Fax (03) 372 1015
Email: sally_cook@moh.govt.nz

19 June 2003

Professor P Joyce
Department of Psychological Medicine
P O Box 4345
Christchurch

Dear Professor Joyce

**A randomized clinical trial of Schema Focused Therapy for depression**
**Investigators: Prof P Joyce, Dr J Carter, J Jordan, V McIntosh, Dr R Porter, Prof C Frampton**
**Ethics reference: CTY/03/04/057**
Information sheet/consent form version 28.5.03

I am pleased to advise that, using the delegated authority granted her by the Committee, the Chairperson of the Canterbury Ethics Committee has given final ethical approval for this study to proceed in Canterbury.

The Committee is satisfied that this study is not being conducted principally for the benefit of the manufacturer or distributor of the medicine or item in respect of which the trial is being carried out.

Approval is until 30 September 2008.

The Committee will review the study annually and notify you if it withdraws approval. It is your responsibility to forward a progress report in May each year. Failure to do so may result in withdrawal of ethical approval. A final report is also required at the conclusion of the study. Report forms are available from the administrator.

It is also a condition of approval that the Committee is advised of any adverse events, if the study does not commence, or the study is altered in any way, including all documentation eg advertisements, letters to prospective participants. Please quote the above ethics committee reference number in all correspondence.

The Committee wishes you well with your research.

Yours sincerely

Sally Cook
Ethics Committee Administrator



Appendix C

# Ngāi Tahu Consultation and Engagement Group

UNIVERSITY OF CANTERBURY
Te Whare Wānanga o Waitaha
CHRISTCHURCH NEW ZEALAND

Monday 29 April 2019

Tēnā koe Annalice Rayner

RE: Therapist Adherence in Cognitive Behavourial Therapy and Schema Therapy for Depression

This letter is on behalf of the Ngāi Tahu Consultation and Engagement Group (NTCEG). I have considered your proposal and acknowledge it is a worthwhile and interesting project and you are clear about how you ought to take participants' (cultural) needs into account if and when applicable.

Given the scope of your project, no issues have been identified and further consultation with Māori is not required.

Thank you for engaging with the Māori consultation process. This will strengthen your research proposal, support the University's Strategy for Māori Development, and increase the likelihood of success with external engagement. It will also increase the likelihood that the outcomes of your research will be of benefit to Māori communities. We wish you all the best with your current project and look forward to hearing about future research plans.

The Ngāi Tahu Consultation and Engagement Group would appreciate a summary of your findings on completion of the current project. Please feel free to contact me if you have any questions.

Ngā mihi whakawhetai ki a koe

Henrietta Carroll (on behalf of the NTCEG)

Kaiarāhi Maori Research
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University of Canterbury | Te Whare Wānanga o Waitaha
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Appendix D

## III Collaborative Study Psychotherapy Rating Scale – Adapted for the Comparison of Cognitive Therapies Study (CSPRS-CCT)

### Subscales and Items:

**Overlap items**
**CBT Subscale**
**Schema Therapy Subscale**
**Non-specific subscale**

- Facilitative conditions
- Explicit directiveness

### CBT and Schema therapy overlap items

1. Education about depression
2. Addressing need for change
4. Encourage independence
5. Advice giving
28. Review since last session
35. Explanation for therapist's direction
42. Negotiating therapy content

### CBT Items

9. Cognitive behavioural therapy rationale
11. Searching for alternative explanations
14. Recording thoughts
15. Scheduling/structuring activities
23. Self-monitoring
25. Practicing rational responses
26. Adaptive/functional value of beliefs
27. Distancing of beliefs
29. Specific Examples
32. Increasing pleasure and mastery
34. Exploring personal meaning
36. Exploring underlying assumptions
38. Homework assigned
40. Relate improvement to cognitive and behavioural change
43. Relationship of thoughts and feelings
46. Collaboration
49. Realistic consequences
53. Homework reviewed
54. Setting and following agenda
57. Planning / practising alternative behaviours
61. Didactic persuasion
62. Testing beliefs prospectively
63. Manipulating behaviour via cues or consequences
66. Skills training
71. Summarising
72. Examine available evidence
73. Substituting more helpful thoughts
75. Reporting cognitions
76. Recognising cognitive errors

77. Behavioural experiments
78. Graded exposure

**Schema therapy Items**
3. Schema link to childhood
6. Affect link to schema
7. Test schemas prospectively
8. Coping styles
10. Schema/modes education
13. Schema therapy rationale
16. Identification of schema/modes
17. Client feelings in therapy
18. Therapy link to rest of life
19. Therapist/client relationship
22. Experience of affect
24. Behavioural pattern-breaking
37. Empathic confrontation
39. Safe place imagery
44. Use of experiential techniques
47. Coping skills
50. Use of role play
51. Exploration of childhood
52. Didactic persuasion re schemas
55. Schema formulation
56. Activation of schema/modes/coping styles
58. Needs education
64. Link schemas or modes to depressive symptoms or life problems
65. Use of imagery for assessment
67. Reality test
68. Practicing helpful schemas
70. Reattribution
74. Reattribution to schema

**NON-SPECIFIC Items (12)**
Facilitative conditions
12. Empathy
21. Rapport
30. Warmth
31. Supportive encouragement
41. Involvement
45. Convey expertise
48. Therapist's communication style
59. Formality

Explicit directiveness
20. Level of verbal activity
33. Receptive listening
60. Subtle guidance
69. Explicit guidance

Appendix E

ID: Session #:

Therapist:

Session Date:

Rater:

Date rated:

1. EDUCATION ABOUT DEPRESSION: To what extent did the therapist provide written or verbal education about DEPRESSION, consequences or materials related to therapy recommendations? (–171)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | extensively |

2. ADDRESSING SLOW CHANGE: Did the therapist address any slowness to respond to the interventions and provide support and encouragement to make changes? (–)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | extensively |

3. SCHEMA LINK TO CHILDHOOD: Did the therapist relate one or more schemas (or modes) to the client's early life (including childhood)? (–)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | extensively |

4. ENCOURAGES INDEPENDENCE: Did the therapist encourage the client's independence from the therapist in dealing with her/his problems? (16-39)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| no encouragement of the client's independence | | some encouragement of the client's independence | | much encouragement of the client's independence | | extensive encouragement of the client's independence from the therapist |

5. ADVICE GIVING: To what extent did the therapist give specific advice or suggestions regarding depression or other issues? (–170)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | extensively |

6. AFFECT LINK TO SCHEMA: Did the therapist assist the client to link feelings to schema or modes? (–)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | extensively |

7. TEST SCHEMAS PROSPECTIVELY: Did the therapist encourage the client to test schemas prospectively? (--)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | extensively |

8. COPING STYLES: Did the therapist assist the client to identify self-defeating or inappropriate behaviours (dysfunctional coping styles) the client is engaging in outside of the session? (--)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | extensively |

9. COGNITIVE BEHAVIOURAL THERAPY RATIONALE: Did the therapist provide a rationale which emphasised the importance of evaluating the accuracy of the client's beliefs and changing inaccurate beliefs in order to alleviate the client's depression? (55--99)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some discussion | | considerable discussion | | extensive discussion |

10. SCHEMA (MODES) EDUCATION: Did the therapist educate the client about one or more schemas or modes? (--)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | extensively |

11. SEARCHING FOR ALTERNATIVE EXPLANATIONS: Did the therapist help the client to consider alternative explanations for events besides the client's initial explanations for those events? (64-118)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | extensively |

12. EMPATHY: Was the therapist empathic toward the client (i.e. did she/he convey an intimate understanding of and sensitivity to the client's experiences and feelings)? (13-34)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | extensively |

13. SCHEMA THERAPY RATIONALE: Did the therapist provide a rationale which emphasised the role of early experiences resulting in the development of schemas/modes, which in turn drive depression? (--)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some discussion | | considerable discussion | | extensive discussion |

14. RECORDING THOUGHTS: Did the therapist encourage the client to record thoughts between sessions OR review the client's records of her/his thoughts? (76-140)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | extensively |

15. SCHEDULING/STRUCTURING ACTIVITIES: Did the therapist work with the client to schedule OR structure one or more specific activities for the purpose of increasing the likelihood that the client will initiate OR follow through on those activities? (74-135)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | extensively |

16. IDENTIFICATION OF SCHEMA/MODES: Did the therapist label or ask client to label one or more schema (or modes)? (–)
*Modes are: the abandoned/abused child, the angry/impulsive child, the punitive parent(side), the detached protector and the healthy adult or an equivalent term.*

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | extensively |

17. CLIENT FEELINGS IN THERAPY: Did the therapist ask directly about the client's feelings or thoughts regarding the therapy relationship or about the therapist him/herself? (–)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | extensively |

18. THERAPY LINK TO REST OF LIFE: Did the therapist link aspects of therapy and the therapeutic relationship to situations in the client's life outside therapy? (–)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | extensively |

19. THERAPIST/CLIENT RELATIONSHIP: Did the therapist try to resolve problems that are arising in the therapy relationship? (–)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | extensively |

20. LEVEL OF VERBAL ACTIVITY: How much did the therapist talk? (17-42)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| said little or nothing | | some | | quite a lot | | talked extensively |

21. RAPPORT: How much rapport was there between therapist and client (i.e. how well did the therapist and client get along)? (12-33)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| total absence of rapport | | some rapport | | considerable rapport | | excellent rapport |

22. EXPERIENCE OF AFFECT: Did the therapist assist the client to express and/or experience a strong emotion, opinion, need? (–)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | extensively |

23. SELF-MONITORING: Did the therapist encourage the client to record feelings, activities, or events between sessions OR review the client's records of feelings, activities, or events? (75-138)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | extensively |

24. BEHAVIOURAL PATTERN-BREAKING: Did the therapist assign behavioural homework or recommend that the client tries something outside of a session? (–)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | extensively |

25. PRACTICING RATIONAL RESPONSES: Did the therapist and client practice possible rational responses to the client's negative thoughts or beliefs? (69-126)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | extensively |

26. ADAPTIVE/FUNCTIONAL VALUE OF BELIEFS: Did the therapist guide the client to consider whether or not maintaining a specific belief is adaptive for the client (regardless of whether or not it is accurate)? (66-121)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | extensively |

27. DISTANCING OF BELIEFS: Did the therapist encourage the client to view her/his thoughts as beliefs which may or may not be true rather than as established facts? (61-111)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | extensively |

28. REVIEW SINCE LAST SESSION: to what extent did the therapist review the depressive symptoms since the last session? (–173)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | extensively |

29. SPECIFIC EXAMPLES: Did the therapist urge the client to give concrete, specific examples of beliefs OR events? (21-47)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | extensively |

30. WARMTH: Did the therapist convey warmth? (11-32)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all or very little | | some | | a lot | | very much |

31. SUPPORTIVE ENCOURAGEMENT: Was the therapist supportive of the client by acknowledging the client's gains during therapy OR by reassuring the client that gains will be forthcoming? (7-25)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | extremely |

32. INCREASING PLEASURE AND MASTERY: Did the therapist encourage the client to engage in activities which would be pleasurable to the client or from which the client would obtain a sense of accomplishment? (73-133)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | extensively |

33. RECEPTIVE LISTENING: Did the therapist appear to allow silence to continue (or use minimal encouragements such as "uh-huh", "mm-hmm", "okay") as a means of encouraging the client to talk. (20–46)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | a lot | | very much |

34. EXPLORING PERSONAL MEANING: Did the therapist probe for beliefs related to a thought the client reported in order to explore the personal meaning associated with the client's initial thought? (58-105)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some exploration of client's personal meaning system | | considerable exploration of client's personal meaning system | | extensive exploration of the client's personal meaning system which included a discussion of the impact of those related beliefs on the client's affect |

35. EXPLANATION FOR THERAPIST'S DIRECTION: Did the therapist explain to the client the therapist's reasons for pursuing a particular topic in the session? (79-144)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | extensively |

36. IDENTIFYING UNDERLYING ASSUMPTIONS: Did the therapist explore with the client a general belief that underlies many of the client's specific negative thoughts and beliefs? (60-109)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some mention of underlying assumption(s) | | considerable discussion of client's underlying assumption(s) | | extensive discussion of client's underlying assumption(s) |

37. EMPATHIC CONFRONTATION: Did the therapist encourage, push or confront client as appropriate (such as to deal with upsetting feelings, make life change, do homework, practice coping skill) or set limits as appropriate when the client "acted out" in an empathic manner? (BE86)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | extensively |

38. HOMEWORK ASSIGNED: Did the therapist or client develop one or more specific assignments for the client to engage in between sessions? (72-130)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some attempt to develop homework | | considerable attempt to develop homework | | extensive attempt to develop homework |

39. SAFE PLACE IMAGERY: Did the therapist encourage the client to develop a safe place image or to use safe place imagery as a grounding mechanism? (BE85)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | extensively |

40. RELATE IMPROVEMENT TO COGNITIVE CHANGE: Did the therapist relate improvement that has occurred in the client's depressive symptoms or related problems to changes in the client's beliefs? (56-101)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | extensively |

41. INVOLVEMENT: How involved was the therapist? (10-30)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| very detached | | somewhat detached | | mainly involved | | very involved |

42. NEGOTIATING THERAPY CONTENT: Did the therapist negotiate with the client assignments, changes in direction, or major emphases of the session in a way that gave the client opportunity to have input? (78-142)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | extensively |

43. RELATIONSHIP OF THOUGHTS AND FEELINGS: Did the therapist encourage the client to relate affective states that the client had experienced (OR will experience in the future) to the client's ongoing thoughts? (54-98)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some discussion | | considerable discussion | | extensive discussion |

44. USE OF EXPERIENTIAL TECHNIQUES: Did the therapist use experiential techniques such as imagery, safe place imagery, schema dialogue or two chair technique to assess or promote schema (or mode) change? (BE84)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | extensively |

45. CONVEY EXPERTISE: Did the therapist convey that she/he understood the client's problems and is able to help the client? (8-27)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | extensively |

46. COLLABORATION: Did the therapist actively attempt to engage the client in working together to explore therapeutic issues? (15-37)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| therapist made no attempt to involve the client in working together | | therapist occasionally attempted to involve the client in working together | | therapist frequently attempted to involve the client in working together | | throughout the session therapist actively solicited the client's involvement in working together |

47. COPING SKILLS: Did the therapist discuss using skills to cope with life problems (or follow-up on previously learnt coping skills) outside the session? (for example, flashcards; transitional object; diary or schema diary; relaxation or controlled breathing; audio tape; reaching out to friends; anger management; nurturing abandoned child; imaginary dialogue; problem solving; labeling modes or schemas; call therapist/office; writing letters; assertive communication skills; identifying, acknowledging or expressing feelings; behavioural experiments) (–)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | extensively |

48. THERAPIST'S COMMUNICATION STYLE: How interesting is the therapist's style of communication? (Consider (1) the vividness of her/his language; (2) the originality of her/his ideas; (3) the liveliness of her/his manner of speaking.) (9-29)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| dull uninteresting | | less interesting than average | | more interesting than average | | very interesting |

49. REALISTIC CONSEQUENCES: Did the therapist work with the client to determine what the realistic consequences would be if the client's belief proved to be true? (65-120)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | Extensively |

50. USE OF ROLE PLAY: Did the therapist use role play to rehearse handling real life situations outside the session? (–)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | extensively |

51. EXPLORATION OF CHILDHOOD: Did the therapist explore aspects of the client's childhood? (–)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | extensively |

52. DIDACTIC PERSUASION RE SCHEMAS: Did the therapist use didactic persuasion to urge the client to change maladaptive schemas? (67-123)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | extensively |

53. HOMEWORK REVIEWED: Did the therapist review previously assigned homework with the client? (2-16)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| did not OR none assigned | | some attention | | considerable attention | | extensively reviewed homework AND integrated into the rest of the session |

54. SETTING AND FOLLOWING AGENDA: Did the therapist work collaboratively with the client to formulate and follow a specific agenda for the session? (1-13)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | thoroughly |

55. SCHEMA FORMULATION: Did the therapist provide a schema (or modes) formulation that incorporated childhood experiences, schemas or modes and depressive behaviours? (–)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | extensively |

56. ACTIVATION OF SCHEMA/MODES/COPING STYLES: Did the therapist notice when the client's schema (mode, coping style) is activated during a session and point it out to client? (here and now interactions in the sessions) (–)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | extensively |

57. PLANNING/PRACTICING ALTERNATIVE BEHAVIOURS: Did the therapist work with the client to plan OR to practice alternative overt behaviours for the client to utilise outside of therapy? (70-128)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | extensively |

58. NEEDS EDUCATION: Did the therapist educate the client about universal/common needs and/or value of emotions (and/or opinion)? (BE78)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | extensively |

59. FORMALITY: Did the therapist adopt a formal stance in her/his interactions with the client? (Defined as: Strict adherence to the therapeutic role such that little of the therapist's own personality emerges during the session) (14-36)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all formal; therapist emerged as a person | | somewhat formal (primarily informal) | | considerably formal | | extremely formal; therapist did not emerge as a person |

60. SUBTLE GUIDANCE: How much did the therapist direct or guide the session in a subtle way? (19-45)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| therapist offered no guidance OR guidance was not subtle | | | | considerably | | extremely |

61. DIDACTIC PERSUASION: Did the therapist use didactic persuasion to urge the client to change her/his belief(s)? (67-123)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | extensively |

62. TESTING BELIEFS PROSPECTIVELY: Did the therapist encourage the client to 1) engage in specific behaviours for the purpose of testing the validity of her/his beliefs, OR 2) make explicit predictions about external events so that the outcomes of those events could serve as tests of those predictions, OR 3) review the outcome of a previously designed prospective test? (63-115)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | Extensively |

63. MANIPULATING BEHAVIOUR VIA CUES OR CONSEQUENCES: Did the therapist help the client to arrange for cues (i.e. stimulus control) OR consequences (i.e. reinforcement or punishment) for the client's specific thoughts or behaviours in order to manipulate the occurrence of those behaviours? (77-141)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | extensively |

64. LINK SCHEMAS (OR MODES) TO DEPRESSIVE SYMPTOMS OR LIFE PROBLEMS: Did the therapist make links between a specific depressive symptom or life-problem and one or more schemas (or modes)? (–)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | extensively |

65. USE OF IMAGERY FOR ASSESSMENT: Did the therapist use imagery for the assessment of schemas (or modes)? (–)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | extensively |

66. SKILLS TRAINING: Did the therapist attempt to teach the client skills (e.g. assertiveness, social skills, task relevant skills) in the session? (71-129)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | Extensively |

67. REALITY TEST: Did the therapist help the client to examine or test out whether a particular schema or schema-driven reaction is accurate? (BE73)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | extensively |

68. PRACTICING HELPFUL SCHEMAS: Did the therapist encourage or assist the client to practice possible more helpful schemas in response to the client's maladaptive schemas? (BE71)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | extensively |

69. EXPLICIT GUIDANCE: How much did the therapist direct or guide the session in an explicit way? (18-42)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| therapist offered no guidance OR guidance was not explicit | | some | | considerably | | extremely |

70. REATTRIBUTION: Did the therapist help the client to reattribute negative treatment of the client as a child to others' deficiencies instead of the client's deficiencies? (BE70)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | extensively |

71. SUMMARISING: Did the therapist summarize OR encourage the client to summarize key issues discussed either in a previous session or in the current session? (80-145)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | extensively |

72. EXAMINE AVAILABLE EVIDENCE: Did the therapist help the client to use currently available evidence or information (including the client's prior experiences) to test the validity of the client's beliefs? (62-113)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | Extensively |

73. SUBSTITUTING MORE HELPFUL THOUGHTS: Did the therapist encourage the client to substitute a more positive belief for another (whether or not the substitute belief was more accurate or realistic), solely because the client would feel better if she/he thought another way? (68-125)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | extensively |

74. REATTRIBUTION TO SCHEMA: Did the therapist help the client to reattribute life-problems or symptoms to schemas (or modes) instead of inherent personal flaws? (–)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | extensively |

75. REPORTING COGNITIONS: Did the therapist ask the client to report specific thoughts (as verbatim as possible) that the client experienced either in the session OR in a situation which occurred prior to the session? (57-103)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | infrequent requests | | several requests | | frequent requests for specific thoughts |

76. RECOGNISING COGNITIVE ERRORS: Did the therapist help the client to identify specific types of cognitive distortions or errors (e.g. all-or-none thinking, over-generalisation) that were present in the client's thinking? (59-107)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | extensively |

77. BEHAVIOURAL EXPERIMENTS: Did the therapist help the client to design or carry out behavioural experiment, a planned activity based on experimentation or observation, undertaken by the client to test existing beliefs and/or help test more adaptive beliefs? (–)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | extensively |

78. GRADED EXPOSURE: Did the therapist help the client to design or carry out a graded exposure task, designed to help the client manage fears or reduce avoidance? (–)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| not at all | | some | | considerably | | extensively |